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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/882,708	06/15/2001	Scott Parkhill	ECO0004-US	9365

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EXAMINER

DINH, TUAN T

ART UNIT

PAPER NUMBER

2827

DATE MAILED: 10/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/882,708

Applicant(s)

PARKHILL ET AL.

Examiner

Tuan T Dinh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the half-bridges and motor and power source must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim 1 is objected to because of the following informalities: in the last line of the claim "... " should be corrected as --- . ---. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, line 3, there is no antecedent basis for "said positive bus." In line 6, there is no antecedent basis for "said negative bus." In line 9, applicant should clarify whether "a power module" is the same as the power module of line 1. In line 11,

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applicant should clarify whether "a power module" is the same as the power module of line 1.

Regarding claims 2-3, applicant should clarify the structure of the "half-bridge."

Regarding claim 7, line 2, there is no antecedent basis for "the substrate."

Regarding claim 8, line 2, there is no antecedent basis for "the substrate."

Regarding claim 9, in line 3, there is no antecedent basis for "the motor" or "the power source." In line 9, there is no antecedent basis for "said positive bus." In line 12, there is no antecedent basis for "said negative bus." In lines 15 and 17, applicant should clarify whether the "a power module" is the same as the power module of line 1.

Regarding claim 17, in line 2, there is no antecedent basis for "the switches." In line 6, there is no antecedent basis for "the positive and negative leads."

Regarding claim 20, applicant should clarify the structure of the "half-bridge."

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-20, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 09117126A in view of Catrambone et al. (US 6078501).

Regarding claims 1 and 9 JP 09117126A discloses a power module comprising:

positive and negative dc conductor bus plates (3, 4); connectors fastened to both the positive and negative bus plates (figure 1); the positive/negative connectors being arranged such that the counter-flow of currents is permitted to thereby cancel magnetic fields and their associated inductances; and

the DC conductor bus plates being laminated and insulated from each other separating the high and low sides of the power module.

JP 09117126A discloses the instant claimed invention except for: leads being connected to the positive and negative bus plates.

Catrambone et al. discloses a power module having positive and negative leads connected to positive and negative buses (column 5, lines 16-43).

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the terminal design as taught by Catrambone et al. to employ the power module of JP 09117126A for the purpose of enabling selective tapping.

Regarding claims 2-3 and 10-12 Catrambone et al. further discloses the use of a half-bridge module.

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the half-bridge module in the power module of JP 09117126A in order to provide high power output.

Regarding claim 4, the specific location of the half-bridge module would have been an obvious design consideration based on the intended application of the module.

Regarding claims 5 and 13, JP 09117126A discloses an insulation layer (figure 2).

Regarding claims 6 and 14, Catrambone et al. further shows the positive and negative leads being substantially adjacent.

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the lead arrangement as taught by Catrambone et al. with JP 09117126A for the purpose of facilitating connections thereto.

Regarding claims 7-8 and 15-16, the arrangement of the positive/negative buses would have an obvious design consideration based on the specific component to which the module is to be connected.

Regarding claims 17-20, the specific method steps would have been necessary to operate the product structure.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wilson et al., Balanovsky et al., and Toner, Jr. Disclose related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T Dinh whose telephone number is 703-306-5856. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on 703-305-9883. The fax phone numbers

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for the organization where this application or proceeding is assigned are 703-305-1341 for regular communications and 703-305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

TD
September 30, 2002

Albert W. Paladini 9-30-02
ALBERT W. PALADINI
PRIMARY EXAMINER